The Kentucky Core Content Test Blueprint (version 3.0)

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Purpose of the Kentucky Core Content Test

The Kentucky Core Content Test is identified in statute as an essential part of the CATS assessment program. The law requires "open-response or multiple-choice items, or both, to assess student skills in reading, mathematics, science, social studies, the arts, the humanities, and practical living and vocational studies; and an on-demand assessment of student writing. These assessments shall measure, to the extent possible, the core content for assessment."

Results from the Kentucky Core Content Test are to be combined with results from a norm-referenced test (the CTBS/5), the writing portfolio, a technically sound longitudinal measure (when it becomes available), and several non-academic measures to compute the school accountability index.

Overview and purpose of the test blueprint

The test blueprint is a public document designed to communicate the structure and contents of the Kentucky Core Content Test to classroom teachers, administrators, school councils, and other interested persons. It also provides general guidelines for the test contractor to follow in developing the test. The contractor is instructed to match the proportions indicated for sub-domains in each content area. (Although final results are expected to be within 5% of these recommendations, slightly greater discrepancies may appear on the year 2000 test if revision of the Core Content has resulted in a need for additional test items.)

This version of the test blueprint is aligned with the Core Content version of the same number.

The blueprint is organized into several sections. The first provides a general description of the Kentucky Core Content Test, the assessment framework, and the item development process. Separate sections follow for each subject area tested because the structure of the Core Content is <u>not</u> the same across content areas. Each section describes the relative weight assigned to sub-domain areas. Finally, a note indicates how to obtain annotated open response items with sample rubrics, which indicate how each content area is scored.

Development of the test blueprint

The same groups of teachers who created the final draft of the Kentucky Core Content for Assessment (Version 3.0) were asked to recommend how the test content should be divided within their content areas. These teachers, having worked to complete the revised Core Content, had the strongest working knowledge of the revised document and the degree to which it differed from the previous version. By content area, the teachers reached consensus, compared their initial recommendations with the test plan for 1999, and confirmed final recommendations for the distribution of items across content sub-domains.

This version of the test blueprint will take effect with the Kentucky Core Content Test to be administered in spring 2000. It will remain in effect as long as the Core Content is unchanged. (Note: Because of limitations in the existing item pool, minor discrepancies between test and blueprint may be unavoidable for one or two years. The test contractor is expected to produce tests that match the blueprint accurately in every content area by 2002.)

Framework for the assessment

The KCCT grades tested are shown below for each content area.

Kentucky Core Content Tests by Content Area and Grade

Assessment/Grade	3	4	5	6	7	8	9	10	11	12
Reading		Χ			Χ			Χ		
Mathematics			Χ			Χ			Χ	
Science		Χ			Χ				Χ	
Social Studies			Х			Χ			Χ	
Arts & Humanities			Χ			Χ			Χ	
Practical Living & Vocational Studies			Х			Χ		Χ		
Writing On-Demand		Χ			Χ					Χ

To assure that the test provides complete coverage of the Core Content each year, a matrix design is used. This means that six different, equivalent test forms are administered each year. The advantage of this approach is that it allows broad coverage of the core content, providing maximum information to schools regarding their instructional program, but keeps test time reasonable for the individual student. In most content area tests, a student answers only 24 multiple-choice items and six openresponse questions. (An additional four multiple choice and one open-response items are included in each test booklet. These are pre-test items, which are being "tried out" as potential items for future tests. They do not count in student scores or the school accountability index.)

The test is not timed.

The item development/selection process

The Kentucky Core Content Test employs both multiple-choice and open-response items. Either type of item can be written to elicit factual (recall) or higher-order thinking. In this test, open-response items are always designed to elicit higher-order thinking. Multiple-choice items present the student with four options, only one of which is correct. Open-response items request specific information but students are free to organize and present the information as they choose within one page. The one-page limit is considered as the items are developed.

In each content area, a Content Advisory Committee (CAC) composed of Kentucky teacher's drafts test items to be edited by the contractor. The contractor also adds graphics as indicated by the CAC. In their final form, the items are reviewed by the same CAC that generated them and either selected or rejected for use as future test items. In addition, items are reviewed by special committees for possible bias and for content accuracy. Items rejected by any of these committees will not appear in the test unless revised.

Teachers draft items to address every bulleted statement in the Core Content. Note that when examples are presented in the Core Content as a list (following a colon), test items are limited to the topics/skills in that list. When examples are presented as illustrations (indicated by the use of "e.g." or "such as") additional topics/skills may also appear in related test items. The use of examples in the charts is intended to help clarify what is expected and to provide teachers with examples of what is intended for specific content.

All items are piloted with a sample of Kentucky students before being used "live" for accountability purposes. Each year, every student test booklet contains a limited number of these pre-test items. The contractor subsequently scores them in order to determine which are workable and eligible for use in future tests. Pre-test items do <u>not</u> contribute to the school's accountability index and results for these items are not reported publicly.

The Student Test Booklet development process

The total number of items available for use in the test is sometimes referred to as the item pool. The scoring contractor draws items from this pool to assemble six test booklets or forms that satisfy several conditions. The total set of six forms covers the core content as recommended in the test blueprint. That is, the proportion of items devoted to geometry/measurement in mathematics, or the proportion of items related to informational text in reading matches the recommendations found in the blueprint. No student test booklet is permitted to include only literary items while another contains only informational items. Finally, the booklets are designed to be equivalent in difficulty. It should not matter to an individual student which form of the test s/he receives.

Special forms are identified for students who are hearing impaired or visually impaired. The test is also available in Braille upon request. For detailed information about these special forms, please contact your District Assessment Coordinator or the KDE Division of Assessment Implementation.

KENTUCKY CORE CONTENT TEST READING

The state reading assessment, which includes a variety of reading materials from different cultures and time periods, focuses on those skills and strategies most critical for students to become good readers.

Accountability weight: The reading test contributes to the portion of the school accountability index based on the Kentucky Core Content Test. Within the Kentucky Core Content Test, the accountability weight assigned to reading is 20% at grade 4, 15% at grade 7, and 15% at grade 10. ¹

Sub-domains: The reading test contains only items based on the sub-domains found in the Core Content: Literary Reading, Informational Reading, Persuasive Reading, and Practical/Workplace Reading. The specific content statements in the Core Content define each sub-domain. One or more items in the test represent every Core Content bulleted statement each year. (It is possible that occasionally the combined requirements of the constraints imposed by the blueprint, assembly of balanced forms, and variations in the item pool could prevent the inclusion of every core content bullet in a particular year.)

Recommended content coverage: The Kentucky teachers who developed the revised Core Content have recommended that the test be constructed to reflect the following emphasis across sub-domains each year.

¹ Accountability weights for each content area within the Kentucky Core Content Test are specified in regulation. See 703 KAR 5:020.

Sub-domain	Grade 4	Grade 7	Grade 10
Literary reading , e.g., short stories, novels, essays, poetry, plays and scripts	50%	40%	30%
Informational reading, e.g., journals, magazines, newspaper articles, letters, brochures, reference materials, essays, nonfiction books, and electronic texts	25%	25%	30%
Persuasive Reading, e.g., magazine and newspaper articles, brochures, letters, proposals, speeches, editorials, electronic texts, essays, opinion columns, and advertisements	10%	15%	20%
Practical/Workplace Reading, e.g., articles, letters, memos, brochures, electronic texts, warranties, recipes, forms, consumer texts, manuals, schedules, and directions	15%	20%	20%
	100%	100%	100%

Every item in the test is coded as belonging to one of the four sub-domains above. School reports break down results by these sub-domains. The Core content also distinguishes between reading skills that are to be assessed across all reading types and reading skills required for particular types of text.

Number of items: The reading section of each student test booklet contains 24 multiple-choice items and six open-response items. (An additional four multiple-choice pre-test items and one open-response pre-test item are also included. Results from these items do not contribute to the school accountability index.) The items follow reading passages that have been reviewed and recommended for use in the test by Kentucky teachers.

The complete set of test booklets is designed to include 144 different multiple-choice items and 36 different open-response items based on a total of 36 different reading passages. This allows complete coverage of the Core Content in reading each year.

Reports: Results from the reading test are reported as an overall score for individual students. For a school, results are reported as a total score and also by sub-domain, by item, and by student.

Related support materials: A complete form from the 1999 test is available with scoring rubrics and annotated student responses for selected items. You can access the materials at the following website address: www.kde.state.ky.us

KENTUCKY CORE CONTENT TEST MATHEMATICS

The state mathematics assessment focuses on four content sub-domains and the processes by which students reason, communicate and represent mathematical problem solving.

Accountability weight: The mathematics test contributes to the portion of the school accountability index based on the Kentucky Core Content Test. Within the Kentucky Core Content Test, the accountability weight assigned to mathematics is 20% at grade 5, 15% at grade 8, and 15% at grade 11. ²

Sub-domains: The mathematics test contains only items based on the sub-domains found in the Core Content: Number/Computation, Geometry/Measurement, Probability/Statistics, Algebraic Ideas. The specific content statements in the Core Content define each sub-domain. One or more items in the test represent every Core Content bulleted statement each year. (It is possible that occasionally the combined requirements of the constraints imposed by the blueprint, assembly of balanced forms, and variations in the item pool could prevent the inclusion of every core content bullet in a particular year.)

Recommended content coverage: The Kentucky teachers who developed the revised Core Content have recommended that the test be constructed to reflect the following emphasis across sub-domains each year.

Sub-domain	Grade 5	Grade 8	Grade 11
Number/Computation	45%	35%	20%
Geometry/Measurement	25%	25%	30%
Probability/Statistics	15%	15%	15%
Algebraic Ideas	15%	25%	35%
	100%	100%	100%

Within each of the mathematics sub-domains, the Core Content distinguishes between concepts, skills, and relationships. Test items address each of these aspects of mathematical performance.

Number of items: The mathematics section of each student test booklet contains 24 multiple-choice items and six open-response items. (An additional four multiple-choice pre-test items and one open-response pre-test item are also included. Results from these items do not contribute to the school accountability index.)

² Accountability weights for each content area within the Kentucky Core Content Test are specified in regulation. See 703 KAR 5:020.

The complete set of test booklets is designed to include 144 different multiple-choice items and 36 different open-response items. This allows complete coverage of the Core Content in mathematics each year.

Reports: Results from the mathematics test are reported as an overall score for individual students. For a school, results are reported as a total score and also by subdomain, by item, and by student.

Related support materials: A complete form from the 1999 test is available with scoring rubrics and annotated student responses for selected items. You can access the materials at the following website address: www.kde.state.ky.us

KENTUCKY CORE CONTENT TEST SCIENCE

The Core Content for Science Assessment contains three parts: (1) Conceptual Understandings of Physical, Life, and Earth/Space Science; (2) Scientific Inquiry; and (3) Applications/ Connections, the understanding of the nature and utility of science. Thus, all aspects of achievement in science will be assessed. Inquiry and applications/connections skills will be assessed only in the context of physical, Earth/space, and life sciences content.

Accountability weight: The science test contributes to the portion of the school accountability index based on the Kentucky Core Content Test. Within the Kentucky Core Content Test, the accountability weight assigned to science is 15% at grade 4, 15% at grade 7, and 15% at grade 11. ³

Sub-domains: The science test contains only items based on the sub-domains found in the Core Content: Physical Science, Earth/Space Science, and Life Science. The specific content statements in the Core Content define each sub-domain. One or more items in the test represent every Core Content bulleted statement, except those printed in italics, each year. (It is possible that occasionally the combined requirements of the constraints imposed by the blueprint, assembly of balanced forms, and variations in the item pool could prevent the inclusion of every Core Content bullet in a particular year.)

Recommended content coverage: The Kentucky teachers who developed the revised Core Content have recommended that the test be constructed to reflect the following emphasis across sub-domains each year.

 $^{^{3}}$ Accountability weights for each content area within the Kentucky Core Content Test are specified in regulation. See 703 KAR 5:020.

Sub-domain	Grade 4	Grade 7	Grade 11
Physical Science	33%	30%	35%
Earth/Space Science	33%	35%	30%
Life Science	33%	35%	35%
	100%	100%	100%

In addition to conceptual understanding within each sub-domain, students are also expected to show evidence of several other types of scientific knowledge. Knowledge of scientific inquiry and applications/connections (as described in the Core Content) will be addressed only within the content specified in each of the sub-domains. For example, a test question that requires students to offer an explanation for contradictory or puzzling observations could employ only information based on content from physical science, Earth/space science, or life science identified in the Core Content as appropriate for the grade being tested.

Number of items: The science section of each student test booklet contains 24 multiple-choice items and six open-response items. (An additional four multiple-choice pre-test items and one open-response pre-test item are also included. Results from these items do not contribute to the school accountability index.)

The complete set of test booklets is designed to include 144 different multiple-choice items and 36 different open-response items. This allows complete coverage of the Core Content in science each year.

Reports: Results from the science test are reported as an overall score for individual students. For a school, results are reported as a total score and also by sub-domain, by item, and by student.

Related support materials: A complete form from the 1999 test is available with scoring rubrics and annotated student responses for selected items. You can access the materials at the following website address: www.kde.state.ky.us

KENTUCKY CORE CONTENT TEST SOCIAL STUDIES

The core content test for social studies will assess students' progress toward becoming contributing, participating, and knowledgeable citizens. Students must demonstrate knowledge, understanding, and applications of the content and concepts of the various sub-domains of social studies: government and civics, culture and society, economics, geography, and historical perspective

Accountability weight: The social studies test contributes to the portion of the school accountability index based on the Kentucky Core Content Test. Within the Kentucky Core Content Test, the accountability weight assigned to social studies is 15% at grade 5, 15% at grade 8, and 15% at grade 11. 4

Sub-domains: The social studies test contains only items based on the sub-domains found in the Core Content: Government and Civics, Culture and Society, Economics, Geography, and Historical Perspective. The specific content statements in the Core Content define each sub-domain. One or more items in the test represent every Core Content bulleted statement, except those printed in italics, each year. (It is possible that occasionally the combined requirements of the constraints imposed by the blueprint, assembly of balanced forms, and variations in the item pool could prevent the inclusion of every Core Content bullet in a particular year.)

Recommended content coverage: The Kentucky teachers who developed the revised Core Content have recommended that the test be constructed to reflect the following emphasis across sub-domains each year.

Sub-domain	Grade 5	Grade 8	Grade 11
Government and Civics	25%	30%	20%
Culture and Society	12%	15%	10%
Economics	10%	10%	15%
Geography	25%	15%	20%
Historical Perspective	28%	30%	35%
	100%	100%	100%

Teachers further defined several types of thinking strategies that should be evident in social studies items. They characterized items in three ways: 1) items dealing primarily with recall of factual knowledge; 2) items requiring use of data and visual representations such as graphs; and 3) items requiring conceptual understanding

⁴ Accountability weights for each content area within the Kentucky Core Content Test are specified in regulation. See 703 KAR 5:020.

and/or generalization. In addition to implementing the recommendations for relative emphasis among the sub-domains, the test will contain these item types.

Number of items: The social studies section of each student test booklet contains 24 multiple-choice items and six open-response items. (An additional four multiple-choice pre-test items and one open-response pre-test item are also included. Results from these items do not contribute to the school accountability index.)

The complete set of test booklets is designed to include 144 different multiple-choice items and 36 different open-response items. This allows complete coverage of the Core Content in social studies each year.

Reports: Results from the social studies test are reported as an overall score for individual students. For a school, results are reported as a total score and also by subdomain, by item, and by student.

Related support materials: A complete form from the 1999 test is available with scoring rubrics and annotated student responses for selected items. You can access the materials at the following website address: www.kde.state.ky.us

KENTUCKY CORE CONTENT TEST ARTS & HUMANITIES

The Core Content for Arts and Humanities includes skills required for creating, performing, and responding to works of art. The Kentucky Core Content Test includes only skills in the section labeled Responding. Responding refers to the interaction between a student and a particular medium and is central to the creative and performing processes. A response results from a judgment or evaluation based on established criteria.

Accountability weight: The Arts & Humanities test contributes to the portion of the school accountability index based on the Kentucky Core Content Test. Within the Kentucky Core Content Test, the accountability weight assigned to Arts & Humanities is 5% at grade 5, 7.5% at grade 8, and 7.5% at grade 11. ⁵

Sub-domains: The Arts & Humanities test contains only items based on the sub-domains found in the Core Content: Music, Dance, Drama/Theatre, Visual Arts, and Literature. Literature is not assessed at grade 5. The specific content statements in the Core Content define each sub-domain. One or more items in the test represent every Core Content bulleted statement, except those printed in italics, each year. (It is possible that occasionally the combined requirements of the constraints imposed by the

⁵ Accountability weights for each content area within the Kentucky Core Content Test are specified in regulation. See 703 KAR 5:020.

blueprint, assembly of balanced forms, and variations in the item pool could prevent the inclusion of every core content bullet in a particular year.)

Reference Chart: For each of the five sub-domains a reference chart has been prepared to assist with the selection of instructional materials at the eleventh grade level. The chart is organized according to major movements, time periods and/or cultures. Among the movements, periods and cultures considered are Ancient and lineage-based cultures, Pacific Rim, Classical Greece and Rome, Islamic and Judaic, Medieval, Renaissance, Baroque, Neo-Classicism/"Classical," Romanticism, Realism, Impressionism and Post-Impressionism, and Modern and Contemporary. Each movement, period or culture is not necessarily considered in each sub-domain, making it necessary to consult the chart for specific content in each arts discipline. In addition, under each movement, period, or culture, specific examples are given of the composers, performers, works or types of the arts.

Recommended content coverage: The Kentucky teachers who developed the revised Core Content have recommended that the test be constructed to reflect the following emphasis across sub-domains each year.

Sub-domain	Grade 5	Grade 8	Grade 11
Music	30%	25%	25%
Dance	20%	20%	20%
Drama/Theatre	20%	20%	20%
Visual Arts	30%	25%	25%
Literature		10%	10%
	100%	100%	100%

Within each sub-domain, test questions may focus primarily on the essential elements of the art form, or on historical and cultural context. At the eleventh grade level, questions related to historical and cultural context will use as examples only the artists and works cited in the Reference Chart included in the Core Content. At the eighth grade level since no reference chart is provided the 10% indicated in the table applies only to multiple-choice questions. The 10% of open-response questions that would have been literature have been equally distributed to music and visual arts. Because of the way the Core Content is organized, there is a gradual shift from emphasis on the essential elements in grade 5 to emphasis on historical and cultural context in grade 11.

The humanities no longer appear as a separate sub-domain, but have been included within each of the sub-domains. Approximately 20% of the questions in each sub-domain will reflect the humanities.

Number of items: The Arts & Humanities section of each student test booklet contains eight multiple-choice items and two open-response items. (An additional four multiple-choice pre-test items and one open-response pre-test item are also included. Results from these items do not contribute to the school accountability index.)

The complete set of test booklets is designed to include 96 different multiple-choice items and 24 different open-response items. (Each of the six forms has two versions to allow a full complement of items in Arts & Humanities despite fewer items per student.) This allows complete coverage of the Core Content in Arts and Humanities each year.

Reports: Results from the Arts & Humanities test are <u>not</u> reported for individual students. For a school, results are reported as a total score and also by sub-domain, by item, and by student.

Related support materials: A complete form from the 1999 test is available with scoring rubrics and annotated student responses for selected items. You can access the materials at the following website address: www.kde.state.ky.us

KENTUCKY CORE CONTENT TEST PRACTICAL LIVING/VOCATIONAL STUDIES

The Practical Living/Vocational Studies assessment incorporates two important areas.

Practical Living includes instruction in health, physical education, and consumer science. The content addresses the development of health and fitness habits and behaviors, consumer and resource management, and other concepts that support student growth, development, and achievement. Vocational Studies Core Content includes three areas of focus: career path, transition skills, and postsecondary opportunities.

Accountability weight: The practical living/vocational studies test contributes to the portion of the school accountability index based on the Kentucky Core Content Test. Within the Kentucky Core Content Test, the accountability weight assigned to practical living/vocational studies is 5% at grade 5, 7.5% at grade 8, and 7.5% at grade 10. ⁶

Sub-domains: The practical living/vocational studies test contains only items based on the Core Content. Items can be classified and reported within four broad sub-domains: health, physical education, consumerism, and vocational studies. The specific content statements in the Core Content define each sub-domain. One or more items in the test represent every Core Content bulleted statement, except those printed in italics, each year. (It is possible that occasionally the combined requirements of the constraints

⁶ Accountability weights for each content area within the Kentucky Core Content Test are specified in regulation. See 703 KAR 5:020.

imposed by the blueprint, assembly of balanced forms, and variations in the item pool could prevent the inclusion of every core content bullet in a particular year.)

Recommended content coverage: The Kentucky teachers who developed the revised Core Content have recommended that the test be constructed to reflect the following emphasis across sub-domains each year.

Sub-domain	Grade 5	Grade 8	Grade 10
Health	40%	35%	35%
Physical Education	25%	20%	10%
Consumerism	15%	15%	15%
Vocational Studies	20%	30%	40%
	100%	100%	100%

Number of items: The practical living/vocational studies section of each student test booklet contains eight multiple-choice items and two open-response items. (An additional four multiple-choice pre-test items and one open-response pre-test item are also included. Results from these items do not contribute to the school accountability index.)

The complete set of test booklets is designed to include 96 different multiple-choice items and 24 different open-response items. (Each of the six forms has two versions to allow a full complement of items in Practical Living/Vocational Studies despite fewer items per student.) This allows complete coverage of the Core Content in practical living/vocational studies each year.

Reports: Results from the practical living/vocational studies test are <u>not</u> reported for individual students. For a school, results are reported as a total score and also by subdomain, by item, and by student.

Related support materials: A complete form from the 1999 test is available with scoring rubrics and annotated student responses for selected items. You can access the materials at the following website address: www.kde.state.ky.us

KENTUCKY CORE CONTENT TEST ON-DEMAND WRITING

The purpose of Kentucky's on-demand writing assessment is to determine if students can independently apply skills and knowledge of the writing criteria. Under supervision in a testing situation, students produce a single response to a prompt, written in a single, limited time frame.

Accountability weight: Results from the on-demand writing assessment are combined with the writing portfolio results to produce a single writing accountability index. The total writing score contributes 15% to the portion of the school accountability index based on the Kentucky Core Content Test. At grades 4, 7, and 12, the writing portfolio represents 12% of the writing index and the on-demand writing assessment 3%. ⁷

Sub-domains: The on-demand prompts are structured to elicit student writing which narrates an event, persuades, or responds to a text, graphic, or chart. Grade 4 prompts are structured to elicit student writing which narrates an event, persuades, or responds to text, graphic, or chart in the form of a letter or article. Grade 7 prompts are structured to elicit student writing which narrates an event, persuades, or responds to text, graphic, or chart in the form of a letter, article, or editorial. The grade 12 prompts are structured to elicit student writing which narrates an event, persuades, or responds to text, graphic, or chart in the form of a letter, article, editorial, or speech. The on-demand writing assessment reports a single holistic score based on the same six criteria that are used to judge the writing portfolio. The Core Content specifies which kinds of writing are assessed at each level. No sub-domain scores are reported in writing.

Recommended content coverage: The Kentucky teachers who developed the revised Core Content have recommended that the on-demand writing assessment be constructed to reflect equal emphasis across the three types of writing. Consequently, at grades 4, 7, and 12 the complete set of test booklets includes an equal number of prompts designed to elicit writing which narrates an event, persuades, or responds to a text, graphic, or chart.

Number of items: The on-demand writing section of each student test booklet contains two writing prompts. The students are permitted to respond to the prompt of their choice. The complete set of test booklets contains six different pairs of prompts.

Reports: Results from the on-demand writing assessment are reported for individual students and for the school.

Related support materials: A complete form from the 1999 test is available with scoring rubrics for selected items. You can access the materials at the following website address: www.kde.state.ky.us

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⁷ Accountability weights for each content area within the Kentucky Core Content Test are specified in regulation. See 703 KAR 5:020.